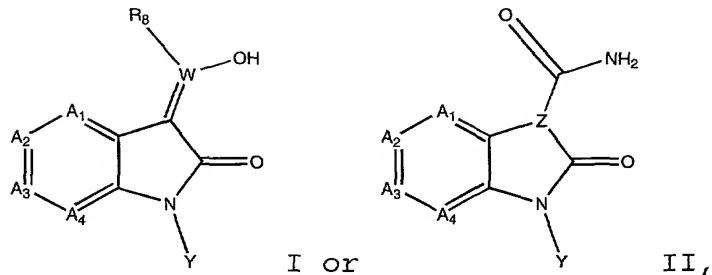


CLAIMS

We claim:

1. A compound of the formula:



or a pharmaceutically acceptable derivative or prodrug

5 thereof; wherein

Y is selected from -(CH₂)-Q₁; -(CO)-Q₁; -(CO)NH-Q₁; -(CO)-O-Q₁; -(SO₂)-Q₁ or -(SO₂)NH-Q₁;

Q₁ is a C₁-C₆ straight chain or branched alkyl or alkenyl group; a 5-7 membered aromatic or non-aromatic carbocyclic or heterocyclic ring; or a 9-14 membered bicyclic or tricyclic aromatic or non-aromatic carbocyclic or heterocyclic ring system, wherein said alkyl, alkenyl, ring or ring system is optionally substituted with one to four substituents, each of which is independently selected 10 from NH₂, NH-R, N(R)₂, NO₂, OH, OR, CF₃, halo, CN, CO₂H, C(O)-NH₂, C(O)-NH-R, C(O)-N(R)₂, C(O)-R, SR, S(O)-R, S(O)₂-R, S(O)₂-NH-R or -R;

15 W is N or C;

wherein when W is N, R₈ is a lone pair of 20 electrons; and

wherein when W is C, R₈ is R₇.

A₁ is N or CR¹;

A₂ is N or CR²;

A₃ is N or CR³;

25 A₄ is N or CR⁴;

provided that at least one of A₁, A₂, A₃ and A₄ must not be N;

R¹ is -NHR⁵, -OR⁵, -SR⁵, or -R⁵;

R², R³, and R⁴ are independently selected from -

5 (CO)NH₂, -(CO)NHR, -(CO)N(R)₂, -NHR⁵, -NHCH₂R⁵, -OR⁵, -SR⁵, -R⁵, -NH(CO)-R⁶, -NH(CO)-NHR⁶, -NH(CO)-NH(CO)R⁶, -NH(CO)-OR⁶, -NH(SO₂)-R⁶, -NH(SO₂)-NHR⁶, -C(O)OH, -C(O)OR, -(CO)-Q₁, -(CO)NH-Q₁, -(CO)NR-Q₁, -(CO)-O-Q₁, -(SO₂)-Q₁ or -(SO₂)NH-Q₁;

R⁵ and R⁶ are each independently selected from H;

10 N(R)₂, NHOH, NO₂, C(O)OR or halo; a C₁-C₆ straight chain or branched alkyl, alkenyl or alkynyl group; a 5-7 membered aromatic or non-aromatic carbocyclic or heterocyclic ring; or a 9-14 membered bicyclic or tricyclic aromatic or non-aromatic carbocyclic or heterocyclic ring; wherein said
15 alkyl, alkenyl, ring or ring system is optionally substituted with one to four substituents, each of which is independently selected from NH₂, NHR, NHC(O)OR, N(R)₂, NO₂, OH, OR, CF₃, halo, CN, Si(R)₃, CO₂H, COOR, CONH₂, CONHR, CON(R)₂, COR, SR, S(O)R, S(O)₂R, S(O)₂NHR or R;

20 R⁷ is H; a C₁-C₆ straight chain or branched alkyl or alkenyl group; a 5-7 membered aromatic or non-aromatic carbocyclic or heterocyclic ring; or a 9-14 membered bicyclic or tricyclic aromatic or non-aromatic carbocyclic or heterocyclic ring; wherein said alkyl, alkenyl, ring or
25 ring system is optionally substituted with one to four substituents, each of which is independently selected from NH₂, NHR, N(R)₂, NO₂, OH, OR, CF₃, halo, CN, CO₂H, CONH₂, CONHR, CON(R)₂, COR, SR, S(O)R, S(O)₂R, S(O)₂NHR or R;

30 R is a C₁-C₆ straight chain or branched alkyl or alkenyl group, a 5-7 membered aromatic or non-aromatic carbocyclic or heterocyclic ring, or a 9-10 membered bicyclic aromatic or non-aromatic carbocyclic or

heterocyclic ring system; and

Z is CH or N.

2. The compound according to claim 1, wherein
5 Y is -(CH₂)₂-Q₁ and Q₁ is a substituted phenyl.

3. The compound according to claim 1, wherein
the compound is selected from any one of the compounds
depicted in Table 1.

10

4. A pharmaceutical composition comprising an
amount of a compound according to any one of claims 1 to 3
effective to inhibit JNK, and a pharmaceutically
acceptable carrier.

15

5. Use of the composition according to claim 4
for the manufacture of a medicament for treating or
preventing inflammatory diseases, autoimmune diseases,
destructive bone disorders, proliferative disorders,
20 infectious diseases, neurodegenerative diseases,
allergies, reperfusion/ischemia in stroke, heart attacks,
angiogenic disorders, organ hypoxia, vascular hyperplasia,
cardiac hypertrophy, thrombin-induced platelet aggregation
or conditions associated with proinflammatory cytokines in
25 a patient in need thereof.

6. The use according to claim 5, wherein said
treating or preventing is for an inflammatory disease
selected from acute pancreatitis, chronic pancreatitis,
30 asthma, allergies, or adult respiratory distress syndrome.

7. The use according to claim 5, wherein said

10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100

treating or preventing is for an autoimmune disease selected from glomerulonephritis, rheumatoid arthritis, systemic lupus erythematosus, scleroderma, chronic thyroiditis, Graves' disease, autoimmune gastritis,
5 diabetes, autoimmune hemolytic anemia, autoimmune neutropenia, thrombocytopenia, atopic dermatitis, chronic active hepatitis, myasthenia gravis, multiple sclerosis, inflammatory bowel disease, ulcerative colitis, Crohn's disease, psoriasis, or graft vs. host disease.

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8. The use according to claim 5, wherein said wherein said treating or preventing is for a destructive bone disorders selected from osteoarthritis, osteoporosis or multiple myeloma-related bone disorder.

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9. The use according to claim 5, wherein said wherein said treating or preventing is for a proliferative disease selected from acute myelogenous leukemia, chronic myelogenous leukemia, metastatic melanoma, Kaposi's sarcoma, or multiple myeloma.

20

10. The use according to claim 5, wherein said wherein said treating or preventing is for a neurodegenerative disease selected from Alzheimer's disease, Parkinson's disease, amyotrophic lateral sclerosis, Huntington's disease, cerebral ischemia or neurodegenerative disease caused by traumatic injury, glutamate neurotoxicity or hypoxia.

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11. The use according to claim 5, wherein said wherein said treating or preventing is for ischemia/reperfusion in stroke or myocardial ischemia,

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renal ischemia, heart attacks, organ hypoxia or thrombin-induced platelet aggregation.

12. The use according to claim 5, wherein said
5 wherein said treating or preventing is for a condition
associated with T-cell activation or pathologic immune
responses.

13. The use according to claim 5, wherein said
10 wherein said treating or preventing is for an angiogenic
disorder selected from solid tumors, ocular
neovascularization, or infantile haemangiomas.